TRACKS 2006 ATLANTA, GA

Implementing The Tracking Network

## breakout ABSTRACT

Abstract No. 45

### TITLE

**LESSONS LEARNED THROUGH LINKAGE STUDIES OF INCIDENT CANCERS AND ENVIRONMENTAL HAZARDS IN NEW JERSEY**

### TRACK

**Network Content**

### OBJECTIVES

To increase awareness within the EPHT community regarding potential challenges that may occur when conducting environmental public health tracking with available health outcome data.

### SUMMARY

Background: As part of the NJ EPHT demonstration project, the New Jersey Department of Health and Senior Services (DHSS) in partnership with the New Jersey Department of Environmental Protection (DEP) conducted three ecologic epidemiologic studies linking rates of selected incident cancers with environmental exposure metrics for benzene and vinyl chloride in air, and disinfection by-products in drinking water. Descriptive data analysis showed distinct differences in both geocoding success rate and benzene exposure estimates between rural and urban/suburban areas. When analyses were restricted to cases geocoded to the census tract using full street address (92% of cases), we found small, but statistically significant, associations between leukemia incidence and 1996 NATA benzene estimates. However, when cases with a residential address that could only be geocoded to the zip code centroid (7% of cases) were added to the analysis, the associations disappeared.

Methods: In order to assess potential biases of including or excluding cancer cases geocoded to zip code centroids, staff of the New Jersey State Cancer Registry extended the original work by constructing and analyzing multiple hypothetical data sets using several different methodologies.

Results and Conclusions: The poster will graphically display results and environmental hazard associations found, and will discuss the lessons learned. Attention must be paid to the geographical pattern of geocoding success and the inclusion of cases geocoded to a zip code centroid, versus cases geocoded to a street segment line. Statewide EPHT projects will need to pay considerable attention to issues regarding completeness of health outcome data and geocoding methodology in order to avoid drawing incorrect conclusions.

Discussion/Recommendations: The NJ EPHT cancer demonstration projects have allowed the NJDHSS and NJDEP to collaboratively find methods that are sustainable for future NJ EPHT development. Close EPHT partnerships with New Jersey's data stewards have already been shown to be mutually beneficial, which is an important component of any collaborative public health program.

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